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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/971,872 | 10/04/2001 | Casey Prindiville | 6047-61247 | 5187 |

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01/30/2002

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EXAMINER

PATEL, ISHWARBHAI B

ART UNIT

PAPER NUMBER

2827

DATE MAILED: 01/30/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/971,872

Applicant(s)

PRINDIVILLE ET AL.

Examiner

Ishwar B Patel

Art Unit

2827

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10-14 and 23 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 10-14 and 23 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 October 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) see 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☒ Other: IDS from parent application#.

DETAILED ACTION

Drawings

1. The drawings are objected to because figures are improperly cross hatched. All of the parts shown in section, and only those parts, must be cross hatched. The cross hatching patterns should be selected from those shown on page 600-81 of MPEP based on the material of the part. See also 37 CFR 1.84(h)(3) and MPEP 608.02.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Re 11/26/02
3. Claims ¹⁰9-14 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eng et al. (US Patent 5,952,611, hereafter Eng), in view of Heo et al. (US Patent 6,021,563, hereafter Heo and Kubota et al., (US Patent 5,475,918, hereafter Kubota) and Vindasius et al., (US Patent 6,098,278, hereafter Vindasius).

Regarding claims ¹⁰9 and 23, Eng discloses a substrate of a support element, the substrate comprising:

an insulating material having a first surface (substrate 70, see figure 1, column 3, line 30-45);

a wire bond slot forming an opening through the substrate extending from the first surface to a second surface (see figure 1),

but fail to disclose a defective pattern of conductors on the first surface; and a cover member attached to the substrate on the second surface so as to cover at least a portion of the wire bond slot, wherein the cover member does not comprise a functional die. However it is normal and known to have a defective pattern on the panel comprising multiple circuits and also it is known not to cut and remove the circuit till the assembly is complete for all the other good circuits. Further, it is known in the art to block or mask the area to protect it from the damage when another processes are carried out on the substrate, such as selective plating. Heo discloses one defective pattern with marking so that it can be identified easily and Kubota discloses using adhesive tape for covering non plated portions to prevent deformation. Therefore, it would have been obvious to have a defective pattern on the substrate covered with a cover member in the assembly of Eng to apparently support the defective area during further processing and avoid damage to the adjacent good circuit area.

Regarding claim 11, the modified assembly of Eng further disclose the cover member comprise self-adhesive tape (Kubota – abstract).

Regarding claim 12, though use of the defective die as cover member is not disclosed, it will be economical to use the defective die instead of a special cover member to cover the defective pattern. Further, as disclosed by Vindasius, it is normal to receive the defective or non – functional die from the manufacturer with proper marking. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the modified assembly of Eng with a defective pattern on the substrate covered with a defective die to support the defective area during further processing and avoid damage to the adjacent good circuit area and making use of the available defective die in place of a special cover member.

Regarding claims 13 and 14, the applicant is claiming the cover member covers from about 80 % to about 90 % of the wire bond slot as claimed in claim 13 and the cover member covers at least 70 % of an opening formed by the wire bond slot as claimed in claim 14. Though, the modified assembly of Jiang does not disclose such detail, it will depend upon the protection required during the further processing and could be arrived at by trial and error to get a good results without damaging the adjacent circuit assembly. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the modified assembly of Eng with wire bond slot covered as claimed in claim 13 and 14, in order to avoid damage to the adjacent assemblies.

Conclusion


4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Farnworth et al., Tao et al., McHugh et al., Sheppard et al., Bai et al., Fusaro et al., Chan et al., disclose the circuit board similar to applicant's claimed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ishwar B Patel whose telephone number is (703) 305 2617. The examiner can normally be reached on M-F (6:30 - 4) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave L Talbott can be reached on (703) 308 9883. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305 3431 for regular communications and (703) 305 7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308 0956.

ibp
January 25, 2002


Klineo
Primary Examiner